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# MARYLAND STATE LAWS POLICIES AND PROGRAMS

pertaining to

# WATER AND RELATED LAND RESOURCES

MARYLAND, STATE PLANNING DEPARTMENT

SEPTEMBER 1966

**Maryland State Planning Department**
1103 State Office Building
Baltimore, Maryland 21201

PUBLICATION No. 137

# MARYLAND - STATE LAWS, POLICIES, AND PROGRAMS PERTAINING TO WATER AND RELATED LAND RESOURCES

STATE OF MARYLAND

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MARYLAND STATE LAWS, POLICIES AND PROGRAMS
PERTAINING TO
WATER AND RELATED LAND RESOURCES

September 1966

Page 7
Paragraph 4

"The ex officio members comprise the (Chief of the Bureau of Environmental Hygiene) of the State Department of Health ..." - should read "The ex officio members comprise the Assistant Commissioner for Environmental Health Services responsible for the Bureau of Resources Protection of the State Department of Health..."

Page 8
Chart

Third column from the left should be altered as follows:

1. from (State Board of Health) to State Board of Health and Mental Hygiene, and

2. from Bureau of (Environmental Hygiene) to Bureau of Resources Protection

Page 8
Chart

Last column to the right, change Regeants to Regents

Page 18
Paragraph 7

todal should read tidal

Page 21
Paragraph 9

advise should read advice

Page 27
Paragraph 3

Comma (,) after Prince George's

Page 28
Paragraph 8

Country should read County

Page 28
Paragraph 9

county should read County

Page 33
Paragraph 5

Department of State Forests and Parks should read Department of Forests and Parks

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no. 137-140

| | |
|---|---|
| Page 39 Last Paragraph | Comma (,) after 1961 |
| Page 41 Paragraph 2 | Department should read Departments |

# PREFACE

Through the years, considerable attention has been paid water resources management and development. In Maryland, this has led to the development of the reparian doctrine dealing with water use and distribution, a body of laws - enabling and regulative - establishing and authorizing agencies of the State to exercise certain water management responsibilities, special districts concerned with specific aspects of water resources management and development, and interstate compact arrangements covering water related natural resource management problems. During the last few years, the degree of intergovernmental and interstate involvement in water resources management and development has led to the creation of numerous basin-wide coordinating and advisory committees on which Maryland is a participant.

Maryland - State Laws, Policies and Programs Pertaining to Water and Related Land Resources is a summarization of the many formal involvements in water resources management and development existing in the State at this time.

In compiling this summarization, the State Planning Department is gratified for the research assistance of Paul M. Galbreath, author of Maryland Water Law. Also, the editorial assistance of (Mrs.) Frances Marchlinus and Patsy Russell of the State Planning Department was invaluable in the preparation of this document.

Albert R. Miller, Jr.

Robert M. August

Maryland State Planning Department

STATE OF MARYLAND

State Laws, Policies, and Programs

Pertaining to

Water and Related Land Resources


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STATE OF MARYLAND

STATE LAWS, POLICIES, AND PROGRAMS

pertaining to

WATER AND RELATED LAND RESOURCES

## SYNOPSIS

The State of Maryland has taken steps from time to time in assuming responsibilities with respect to its water and related land resources. Departments, agencies, and commissions have been created and funds provided for use in carrying out assigned duties and responsibilities for the purpose of promoting and protecting the interests of the people in these valuable resources.

In 1964, the Maryland Legislature took a major step forward in realigning state agency responsibilities relating to natural resources. Several departments were given new names more appropriate in view of newly assigned duties and responsibilities, some of which were transferred from other departments, while others were assigned to the respective department by the Legislature for the first time in 1964.

That part of the following summary that pertains to State departments and agencies represents the steps taken by the Maryland Legislature in the exercise of the State's police power in the interest of public health, safety, and welfare. If more detailed information is desired with respect to these departments, it can be found in the Code of Maryland Laws and in the rules and regulations of the respective departments.

A brief discussion of the right to the use of water as developed by Common Law - court decisions - is included. If more detailed information is desired with respect to the right to use water in Maryland, it may be found in the recent publication, "Maryland Water Law," by Paul M. Galbreath, published by the University of Maryland in 1965. Credit is hereby given for the use of this publication in the preparation of that part of this material pertaining to water rights.

## I. WATER RIGHTS

The right to use water in Maryland has developed through court decisions as part of the Common Law of the State. This Common Law development recognizes the right of landowners to make use of water that exists beneath the surface of, or runs over or adjacent to their property. These rights to use water are valuable property rights and as such are afforded the same constitutional protection as other property rights. They cannot be taken even for a public purpose without giving due compensation. This right is limited by the equal right of other landowners to use water from the same common supply. The right is also subject to regulation by the State under its police power in the interest of public health, safety and welfare. When it becomes necessary to acquire water rights for a public purpose, such as for a public water supply, the power of eminent domain can be made available for use in acquiring the needed rights to the use of water.

### Water on the Surface of the Ground

1. Diffused surface water - This is the water that runs over the surface of the ground after rains and melting snows. It also includes this same water if collected in ponds or lakes before it reaches a surface stream.

A landowner has the right to the natural drainage of diffused surface water from the higher or dominant land to lower or servient land. The lower owner cannot fight the water off his land by backing it up on the higher land above. The upper landowner cannot materially change the nature of the flow from the higher to the lower land by changing the place of entry or by concentrating the flow. This does not mean that the upper landowner cannot change the use of his land. He may make improvements and changes in its use. Whether he becomes liable to the lower or adjoining landowner will depend upon the nature of the improvement to his land and the nature of the damage, if any, resulting to the lower or adjoining land.

When the improvement to land is beneficial to the public, as would be the case in the construction of needed roads, the Court has denied injunctive relief and left the landowner to recover damages for injuries resulting from changes in the flow of surface water over his property. Kennedy-Chamberlin Development Co. vs. Snure, 212 Md. 369, 129A 2d 142 (1957).

Injunctive relief has also been denied when desirable improvements to valuable urban property have been involved. In denying injunctive relief, the Court permitted improvement to the property in question and left the adjoining landowners to recover in damages

for any injury resulting to their property from changes in the flow of surface water. Sainato vs. Potter, 222 Md. 263, 159A 2d 632 (1960); Kidwell vs. Bay Shore Development Corp. 232 Md. 577, 194A 2d 809 (1963).

A landowner may collect diffused surface water flowing over his property and store it in ponds for his use. The lower landowner has no right to this water until it enters his land. 93 Corpus Juris Secundum 803. When diffused surface water enters a stream, it becomes water of a watercourse to which different rules apply.

2. Water flowing in surface streams - watercourses - Under the doctrine of riparian rights, the owner of land bordering upon a surface stream is entitled to use water from the stream to benefit his riparian land. "The natural stream existing by the bounty of Providence for the benefit of the land through which it flows is an incident annexed by operation of law to the land itself." Tyler vs. Wilkinson, 24 Fed. Cases 14,313. His right of use is limited by the equal right of all other riparians to use water from the same stream.

Riparian land must in all cases be land under one common ownership, contiguous to and touching the watercourse and lying within the watershed drained by the stream.

The right of a riparian to make use of the water for domestic purposes is given preference over all other uses. Domestic use has been defined as use for household purposes, watering livestock and chickens, and, in some cases, for watering a lawn or small garden. It is generally believed that a riparian may take all the water he needs for domestic purposes.

With respect to all other uses, such as agricultural which includes irrigation, industrial and other such uses, each riparian is entitled to make a reasonable use of water from a stream for these purposes. Whether or not a particular use is reasonable at the time will depend upon a number of factors such as the size and velocity of the stream, the nature of the banks, the character of the soil and a variety of other facts. Baltimore City vs. Appold, 42 Md. 442, (1875).

The general rule is that each riparian proprietor is entitled to make a reasonable use of the water from a stream for domestic, agricultural and manufacturing purposes; and what is reasonable with respect to the rights of others must depend upon the circumstances, such as the character and size of the stream and the use to which it can be applied. One of the uses of a stream is to detain and obstruct its flow in order to store water behind dams for use on riparian land. West Arlington Improvement Co. vs. Mt. Hope Retreat, 97 Md. 191, 54A 982 (1903).

It is a violation of the riparian right for anyone upstream to discharge untreated sewage and industrial waste into a stream. City of Baltimore vs. Warren Mfg. Co., 59 Md. 96 (1882).

A municipal corporation has no more right to pollute the waters of a stream to the detriment of riparian owners downstream than a private individual has. Livezey vs. Town of Bel Air, 174 Md. 568, 199A 838 (1938).

There are two controls over the pollution of the waters of the State. One is the right of riparian landowners to prevent pollution by others as developed through Common Law - court decisions - described above. Here the individual landowner must take the necessary steps if court action becomes necessary. The other control is by the State under its police power. This latter control is the responsibility of the State Department of Water Resources and the State Department of Health.

When the water in a surface stream flows past the land of a riparian owner, this owner's right to use of the water ceases. He, therefore, has no right as a riparian owner to object to any downstream use that is made of the water.

More recent developments of the riparian doctrine in some states permit unlimited use of the water from a stream on either riparian or non-riparian land as long as no downstream riparian owner desires to make beneficial use of his share of the water at the time.

If the water from a spring flows in a definite channel with evidence of a current or direction of flow and is the source of a surface stream or flows into one, then the spring is a part of the stream and the law of surface streams will apply to the use of water from it. Kelly vs. Nagle, 150 Md. 125, 132A 587 (1926).

On the other hand, if the water from a spring does not flow into a watercourse but wanders over the surface and eventually disappears by soaking into the ground or forms marshes or wet areas from which there is no visible sign of flow, then the waters of the spring would be classified as diffused surface water; and the entire flow could be used by the landowner for any useful purpose. Corpus Juris - Waters - P 835.

Ground Water

1. Water flowing in underground streams - The rights incident to streams of water on the surface and those flowing underneath, when the latter flow in well defined channels, are the same. Western Maryland Railway Co. vs. Martin, 110 Md. 554, 73A 267 (1909).

An underground stream will be protected the same as one on the surface, if it constitutes a stream, the channel or course of which is known. Washington County Water Co. vs. Samuel B. Garver, 91 Md. 398, 46A 979 (1900).

2. Percolating underground water - All the water under the surface of the ground not identified as flowing in well defined channels is percolating ground water. This comprises practically all the underground water in Maryland.

Early court cases in both this country and in England gave to the owner of the surface everything that existed in the soil beneath down to the center of the earth. This included the water. The courts reached this decision in those early cases because little was known about the nature and movement of ground water. One landowner could not prove to the satisfaction of the court that the withdrawal of water by another was the cause of his well or spring going dry.

With increased knowledge relative to the presence and movement of ground water, the courts in many states have applied a reasonable use rule in place of the doctrine of absolute ownership in deciding disputes over the use of ground water. Under the rule of these later cases, owners of the surface hold rights in common to the use of underground water. Each is entitled to his share, and one landowner does not have the right to unreasonably interfere with the equal right of another to the use of this water.

No dispute over the use of ground water has been taken to the Court of Appeals in Maryland. However, this Court did have occasion to make the following comment in Western Maryland Ry. Co. vs. Martin, 110 Md. 554, 73A 267 (1909).

> "The decided weight of English and early American authorities supports the doctrine that percolating water was as much part of the land in which it exists as the soil, stones and minerals therein, and was the absolute property of the owner of the land. The recent American cases show a decided tendency to recede from this early view.....and to so modify that doctrine as may be requisite to do substantial justice between the owners of adjacent lands....."

This language used by the Maryland Court of Appeals might indicate that the Court would not follow the absolute ownership doctrine as applied to the use of water if a dispute over the use of ground water came before it, but would apply the doctrine of reasonable use giving to each overlying landowner an equal right to use of the water.

Land under navigable waters belongs to the State of Maryland unless granted into private ownership prior to 1862. The beds of non-navigable waters belong to and are part of the adjoining land of riparian owners. All navigable waters are subject to the public right of navigation and fishing. The right to fish in non-navigable waters is the exclusive right of adjoining riparian owners. Browne vs. Kennedy, 5 H & J 195 (1821).

As mentioned previously, these are very brief comments relative to the Common Law development of the right to use water. More complete information is contained in the publication, "Maryland Water Law," published by the University of Maryland in 1965.

## II. STATE DEPARTMENTS AND AGENCIES

### Board of Natural Resources[1]

It was the intention of the General Assembly in the establishment of the Board of Natural Resources to provide for coordination of all public and private activities relating to the natural resources of the State of Maryland.

The Board consists of a Chairman, appointed by the Governor, five departmental members, three ex officio members and eight appointive members.

The departmental members comprise the directors of the Departments of Chesapeake Bay Affairs, Game and Inland Fish, Forest and Parks, the Maryland Geological Survey, and the Department of Water Resources.

The ex officio members comprise the Chief of the Bureau of Environmental Hygiene of the State Department of Health, the Director of the Natural Resources Institute of the University of Maryland and the Chairman of the State Soil Conservation Committee.

The appointive members comprise the Director of the Chesapeake Bay Institute of the Johns Hopkins University and seven members appointed by the Governor with the approval of the Senate representing specified geographical areas of the State.

#### Powers and Duties of the Board

The powers and duties of the Board are as follows:

1. coordinating all natural resources activities of the State, including the settlement of conflicts that may arise among departments, agencies, and institutions represented on the Board;

2. providing a forum for essential communication and understanding among its member departments, agencies and institutions;

3. reviewing programs and plans and keeping account of the long-term objectives of each of the departments, agencies and institutions represented on the Board;

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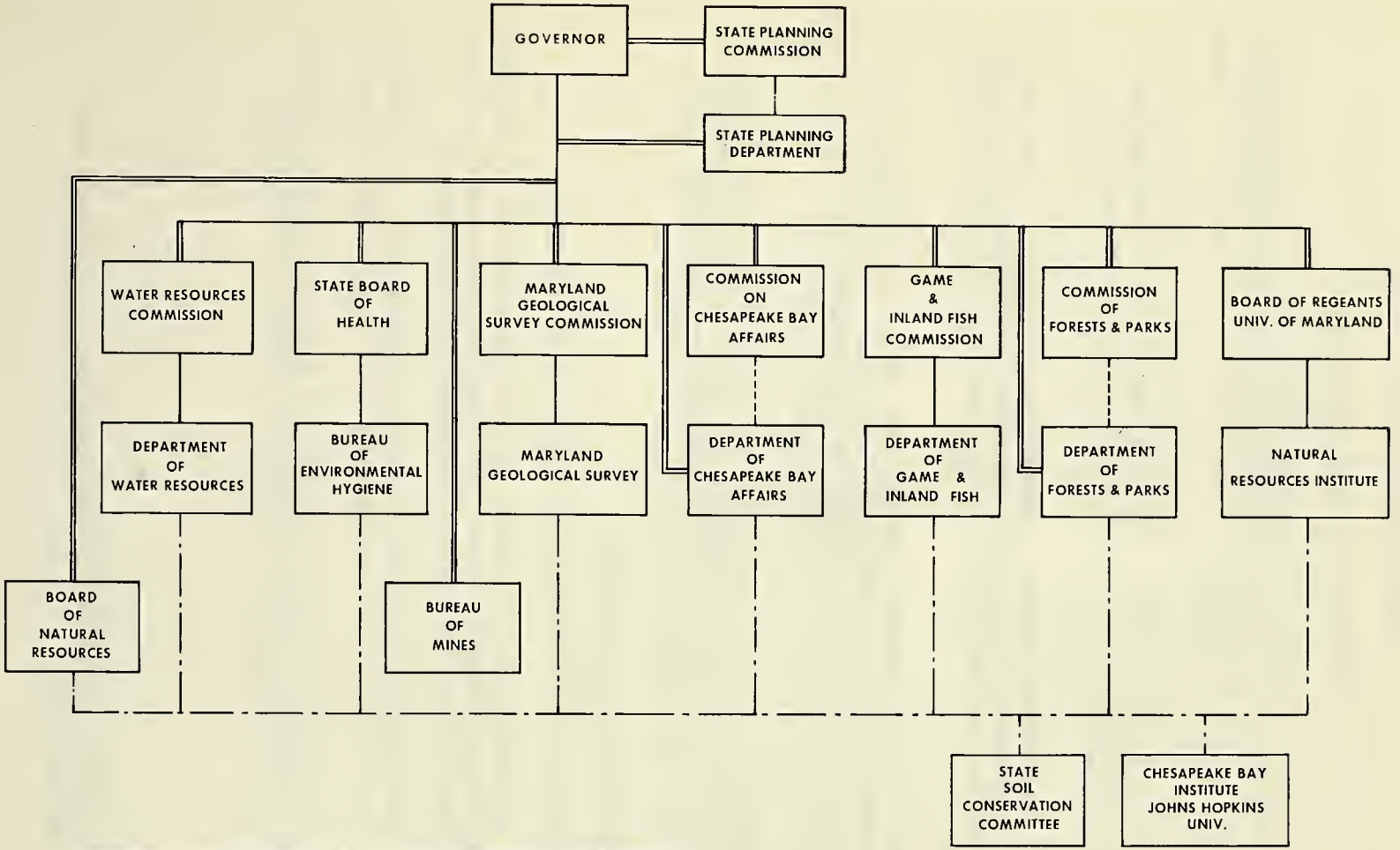
(1) Article 66C - 1957 Code of Maryland Laws - 1965 Supplement (as amended 1966).

PLATE 1

# MARYLAND NATURAL RESOURCES ADMINISTRATIVE STRUCTURE


GOVERNOR
STATE PLANNING COMMISSION
STATE PLANNING DEPARTMENT
WATER RESOURCES COMMISSION
STATE BOARD OF HEALTH
MARYLAND GEOLOGICAL SURVEY COMMISSION
COMMISSION ON CHESAPEAKE BAY AFFAIRS
GAME & INLAND FISH COMMISSION
COMMISSION OF FORESTS & PARKS
BOARD OF REGEANTS UNIV. OF MARYLAND
DEPARTMENT OF WATER RESOURCES
BUREAU OF ENVIRONMENTAL HYGIENE
MARYLAND GEOLOGICAL SURVEY
DEPARTMENT OF CHESAPEAKE BAY AFFAIRS
DEPARTMENT OF GAME & INLAND FISH
DEPARTMENT OF FORESTS & PARKS
NATURAL RESOURCES INSTITUTE
BOARD OF NATURAL RESOURCES
BUREAU OF MINES
STATE SOIL CONSERVATION COMMITTEE
CHESAPEAKE BAY INSTITUTE JOHNS HOPKINS UNIV.
CHAIRMAN, DIRECTOR OR COMMISSION APPOINTED BY THE GOVERNOR
DIRECTOR APPOINTED BY COMMISSION OR BOARD
COMMISSION SERVES AS ADVISOR TO THE DIRECTOR
ADVISE ON AND COORDINATE RESOURCE ACTIVITIES IN THE STATE (REPRESENTED ON BOARD OF NATURAL RESOURCES)

4. publishing an annual report covering the activities of the Board and the annual reports of the departmental and ex officio members of the Board;

5. preparing in cooperation with the State Planning Department a biennial report, containing information with respect to population, land-use trends, recreational demands and technological innovations affecting development and management of natural resources;

6. conducting studies and appraisals of the operations, activities and accomplishments of those agencies represented on the Board;

7. recommending any legislative, budgetary or administrative changes, which will provide more effective administration, clarify responsibilities, terminate obsolete programs, and establish desirable programs for the conservation, development, and use of the State's natural resources;

8. studying the natural resources activities of the subdivisions of the state and recommending procedures for coordinating the natural resources activities of the State and its subdivisions:

9. reviewing federal statutes, policies, programs and activities affecting the natural resources of Maryland and recommending to federal, State, and local agencies and institutions procedures for the coordination required; and

10. maintaining an inventory of public lands acquired or used for the preservation, development, management or enjoyment of the natural resources and reviewing and recommending upon plans and proposals for additional land acquisition.

## Department of Water Resources[1]

It was the intention of the General Assembly in the establishment of the Department of Water Resources to exercise to the fullest extent possible the responsibilities of the State of Maryland for the planning, development, and management of the State's water resources.

The Director of the Department is appointed by the Water Resources Commission[2] with the approval of the Governor. He

(1) Article 96A, Code of Maryland Laws - 1965 Supplement.
(2) The membership and duties of this Commission are discussed on P. 14.

shall be responsible for the exercise of all the powers and duties conferred upon the Department by the provisions of the Article. The Director shall serve as a departmental member of the Board of Natural Resources.

Powers and Duties of the Department

The powers and duties of the Department are as follows:

1. Planning for multiple-purpose development - The Department is responsible for supervising and planning the multiple-purpose development of the waters of the State. It shall prepare and develop a general water resources program which contemplates the proper development and management of the waters of the State on a multiple-purpose basis to serve as a guide to the Department in the performance of its duties.

2. Surveys, mapping, etc. - The Department is authorized to make such surveys, maps, investigations and studies of the water resources of the State as may be necessary for the conduct of its duties.

3. Boundaries of tidal and non-tidal waters - In cooperation with the Departments of Game and Inland Fish and Chesapeake Bay Affairs, the Department shall define the boundaries of tidal and non-tidal waters.

4. Appropriation and use of water - In order to conserve, protect, and utilize the water resources of the State, the Department is authorized to control, through the issuance of permits the appropriation and use of the surface and underground water of the State. Excluded from this regulation is the use of water for domestic and farming purposes and the use of water for an approved water supply of any municipality.

5. Construction, reconstruction and repair of dams, reservoirs or waterway obstructions - Through the issuance of permits, the Department exercises control and supervision over the construction, reconstruction and repair of dams, reservoirs and all other waterworks in any of the water of the State.

Exempt from this regulatory authority are the following:

a. dams or obstructions less than 10 feet in height above the elevation of the stream bed or waterway;

b. reservoirs with a storage capacity of less than one million gallons;

c. reservoirs designed, constructed, and operated as waste stabilization lagoons under permit from the State Department of Health;

d. dams for the impounding of water less than 4 feet in depth over tidal and non-tidal swamp lands for the propagation of muskrats and other wildlife species;

e. farm ponds with drainage area above the structure not exceeding 150 acres, surface area not exceeding 5 acres and depth not exceeding 9 feet above the original stream bed;

f. dug out ponds - those constructed entirely by excavation below existing ground level - are excluded from the above requirements;

g. other ponds constructed as farm ponds with a drainage area above the structure not exceeding 400 acres in the Piedmont and mountain areas of the State and 700 acres in the Coastal Plain areas, and not exceeding 12 acres in surface area and 15 feet in depth measured from the original stream bed.

6. Water resources development and public hearings - The statute provides for the filing of applications, the giving of notice of and conducting public hearings on applications for the appropriation or use of water and for the construction and repair of dams, reservoirs and waterway obstructions.

7. Permits for conduits, pipes, etc. pertaining to the Potomac - A permit from the Department is required to construct, reconstruct, change or make any addition to any conduit, pipeline, wire cable, trestle or other devise, structure or apparatus, in, under, through or over the bed or waters of the Potomac River.

8. Flood prevention - In the discharge of the Department's flood-control responsibilities, it is authorized to develop and carry out long-range programs for flood control in cooperation with the federal government to assist local governments and other state agencies in drafting local land use and other regulations pertaining to areas subject to flooding, and to administer such financial assistance for flood control as may be made available.

9. Well drilling - The Department regulates well drilling through the licensing of well drillers, and issuance of permits to drill wells. Upon completion of the drilling of any well, the driller is required to file with the Department a log of each well and other information. Owners are required to seal abandoned wells and are prohibited from allowing the water of a pumping or flowing well to run to waste.

10. Pollution control - It is the Department's responsibility to study, investigate and recommend means of eliminating pollution[1] from the waters of the State.

The major responsibilities of the Department with respect to pollution are the following:

a. encouraging voluntary cooperation by individuals, industries, municipalities, counties and other public bodies in restoring, preserving, and maintaining the purity of the waters of the State;

b. coordinating and stimulating the activities of the several state agencies concerned with water quality;

c. enforcing existing laws relating to the abatement of pollution of the waters of the State;

d. supplementing through studies, investigations, surveys, and research existing technical data and other needed information;

e. cooperating with other state agencies engaged in accumulating and developing additional data and information;

f. cooperating with other state agencies in enforcing water pollution control laws and regulations;

g. recommending standards for sewage or waste effluents discharged into the waters of the State;

h. receiving complaints, making investigations and taking such action as may seem appropriate;

i. conducting hearings as may be necessary in the discharge of the Department's pollution abatement responsibilities;

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(1) Pollution as defined by Maryland statute comprises the discharge or deposit into the waters of the State any liquid, gaseous or solid substance or substances which may create a nuisance therein or render such water unclean or noxious as to be detrimental to the propagation, cultivation or conservation of animals, fish or aquatic life, or unsuitable with reasonable treatment for use as present or possible future source of public water supply or unsuitable for commercial, industrial, agricultural, recreational or other reasonable uses.

j. issuing special orders directing polluters to take remedial action within a specified period of time; in the event of failure to comply, the Department shall direct such polluters to build or install such designed systems, treatment plant structures, devices or other means as are practicable and use injunctive powers when called for;

k. cooperating with other state agencies to prevent the discharge of oil from vessels into the waters of the State;

l. establishing water-quality standards for the waters of the State;

m. cooperating with the responsible authorities of other states and with the federal government concerning policies, procedures and means to control, regulate or correct the pollution of interstate waters and recommending the carrying out of such procedures to the proper state agencies;

n. receiving, administering and expending such federal funds as are available for pollution control; and

o. recommending from time to time such legislative or administrative action as may be deemed necessary and desirable to better control the pollution of the waters of the State.

While both the Departments of Water Resources and Health have statutory responsibilities for water pollution abatement and control, the Department of Water Resources has primary responsibility with respect to water pollution resulting from the discharge of industrial waste and the Department of Health has primary responsibility with respect to water pollution from untreated or inadequately treated sewage.

Water Resources Commission

The Commission, (1) consisting of five members appointed by the Governor with the consent of the Senate, in general, acts in an advisory capacity to the Director. In carrying out this responsibility, the Commission approves long-range plans and programs of the Department on the basis of anticipated future water resource needs.

(1) The members of the Commission are to represent the general fields of public health, industry, agriculture, municipal administration and natural resources.

In addition, the Commission has authority to promulgate rules and regulations pursuant to the authority granted the Department by the laws of Maryland and to hold public hearings and meetings as may be necessary in the discharge of their duties.

State Department of Health - Bureau of Resources Protection [1]

The State Department of Health exercises responsibility for the general supervision and control over the sanitary conditions of the waters of the State as related to public health. This responsibility is carried out by the Bureau of Resources Protection of the State Department of Health.

Powers and Duties of the Department

The powers and duties of the Department are as follows:

1. supervising and controlling the waters of the State, in so far as their sanitary and physical condition affect the public health or comfort;

2. promulgating and enforcing rules and regulations, and ordering works to be executed to correct and prevent the pollution of the waters of the State;

3. investigating all sources of potable water and ice supply and all points of sewage discharge;

4. examining all existing public water supplies, sewage systems and refuse disposal plants, with power to compel their operation in a manner which shall protect the public health and comfort, or ordering their alteration, extension or replacement by other structures when deemed necessary;

5. passing upon the design and construction of all public water supplies, sewage systems and refuse disposal plants which shall be built within the State;

6. governing the individual water supply and sewage disposal systems for homes and other establishments in the counties of Maryland where public water supply and sewerage systems are not available;

7. developing a comprehensive and coordinated State-wide program for the collection and disposal of solid waste materials;

(1) Article 43 - 1957 Code of Maryland Laws and 1965 Supplement. Reorganization of the State Department of Health, effective July 1, 1966, changed the Bureau of Environmental Hygiene to the Bureaus of Resources Protection and Consumer Protection, both under the Assistant Commissioner for Environmental Health Services.

8. promoting the construction of water, sewerage and solid wastes facilities with the use of federal and state funds;

9. consulting with and advising county and municipal authorities and others on water supply and waste disposal problems;

10. administering the legislative requirement that the governing body of each county be responsible for the preparation of plans for public water supplies and sewerage systems throughout the county;

11. encouraging basin-wide plans leading to the integration of communities to be served by single treatment facilities where possible;

12. assisting counties and municipalities in developing comprehensive master plans for the construction of basic main facilities for the distribution of water and the collection of sewage and industrial wastes;

13. reviewing and approving subdivision plans as related to the provisions of water supply and sanitary waste disposal;

14. after investigation, issuing orders requiring the correction of any water supply or sewerage system or operations detrimental to the public health;

15. conducting shoreline surveys in connection with shellfish waters;

16. governing the sanitary control of the growing, harvesting, handling, processing, packing, and shipping of shellfish;

17. monitoring of streams for pesticides; and

18. contracting for research or scientific investigation with appropriate research organizations.

In addition to the foregoing, regulatory authority is exercised over public health standards at public beaches and public swimming pools.

## Maryland Geological Survey[1]

The responsibilities of the Survey are under the direction of a Commission consisting of five members appointed by the Governor.

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(1) Article 66C - 1957 Code of Maryland Laws and 1965 Supplement.

The Survey is administered by a Director having professional competency in the fields of geology and water resources who is appointed by the Commission.

Powers and Duties of the Commission

The powers and duties of the Commission are as follows:

1. conducting topographic, geologic, hydrographic and geophysical surveys;

2. preparing topographic, geologic, and other types of maps to meet specific needs;

3. preparing reports on the extent and character of the State's geology, minerals, and water resources;

4. conducting water quality investigations;

5. investigating and recommending plans and policies for the protection of the waterfront of the State against erosion and deposition and cooperating in carrying out plans for the development of the waterfront property of the state[1]; and

6. regulating gas and oil wells and the drilling of such wells for storage of gas and oil.

Bureau of Mines

In addition to the aforementioned, the Commission exercises regulatory authority over strip mining and underground mining of coal. This function is vested in the Survey's Bureau of Mines which is administered by a Director who is appointed by the Governor.

The Department of Chesapeake Bay Affairs[2]

It was the intention of the General Assembly in the establishment of the Department of Chesapeake Bay Affairs that the planning, development, management and conservation of the Chesapeake Bay and

(1) The Survey conducts research and identifies shore erosion problems in the Chesapeake Bay area. The Department of Chesapeake Bay Affairs has the responsibility for carrying out protective measures.
(2) Article 66C - 1957 Code of Maryland Laws - 1965 Supplement, Article 14B - State Boat Act

and all other tidal waters and the shorelines and bottoms thereof are the responsibility of the State of Maryland.

The Director of the Department is appointed by the Governor with the advice and consent of the Senate and serves at the Governor's pleasure.(1) The Director shall serve as a departmental member of the Board of Natural Resources.

A commission of five members, known as the Commission on Chesapeake Bay Affairs is appointed by the Governor, by and with the consent of the Senate. These commissioners are appointed from the tidewater counties of Maryland.

Powers and Duties of the Commission

The powers and duties of the Commission are as follows:

1. acting in an advisory capacity to the Director;

2. keeping itself fully informed of the activities of the Department;

3. considering the needs for future resource development in the Cheasapeake Bay and other tidal waters of the State from the points of view of the several economic and social interests of its people and to approve long-range programs of the Department;

4. promulgating rules and regulations and amending the same from time to time in order to carry out the responsibilities of the Department;

5. assisting the Director in fostering public awareness and understanding of the objectives and functions of the Department and in stimulating public participation and interest in orderly integrated resource development within the Chesapeake Bay and coastal regions; and

6. holding public hearings and sponsoring meetings when deemed necessary and useful in the execution of its duties.

Powers and Duties of the Department

The powers and duties of the Department are as follows:

(1) It should be noted, that the present Director holds office under the State's merit system. However, future directors shall be appointed by the Governor and serve at his pleasure.

1. planning for development and management of the Chesapeake Bay and all other tidal waters, including the shorelines and bottoms and all associated resources excluding any matters under the jurisdiction of other state agencies;

2. planning and developing recreational facilities associated with the Chesapeake Bay and other tidal waters;

3. cooperating with other agencies in the protection of the State's tidal waterfront and waterways against erosion and deposition;

4. conducting of demonstrations of extended duration for the purpose of improving the fisheries or for such other needs as may be necessary for carrying out its duties;

5. furthering development of navigational aids and improvement of the Bay's waterways and other tidal waters of the State;

6. exercising general supervisory power, regulation and control of the natural resources found within the boundaries of the State's tidal waters;

7. exercising the powers conferred and performing the duties imposed by all laws now in force or to be enacted relating to the natural resources of the State within the boundaries of its todal waters;

8. operating, selling, buying, leasing, exchanging, renting or repairing vehicles, vessels, boats, nets and other equipment as may be necessary for its work;

9. contracting for research or scientific investigation with appropriate research organizations;

10. issuing licenses for commercial fishing;

11. negotiating with other states regarding catching of crabs, size of fish and opening and closing of seasons;

12. using any funds available to the Department from the federal government or other sources for the rehabilitation of the seafood industry;

13. cooperating with counties or political subdivision of counties providing funds for purchasing and planting shells and purchasing and transplanting seed oysters;

14. importing shellfish or other organisms for experimental purposes;

15. regulating the removal of sand, gravel, and other resources from public lands under the waters of the Chesapeake Bay;

16. establishing a quarantine where necessary and advisable to prevent the importation or spread of diseases or conditions detrimental to shellfish; and

17. upholding all laws pertaining to the aquatic resources of the Chesapeake Bay.

The responsibilities of the Department regarding shore erosion control are as follows:

1. developing and implementing a public educational program on the causes, effects, and locations of shore erosion and the steps necessary for its control;

2. providing technical assistance to individual property owners, municipalities and counties having specific shore erosion problems;

3. reviewing petitions for creation of shore erosion control districts;

4. designing shore erosion control structures and vegetative control methods for shore erosion control districts;

5. entering into agreements with persons, municipalities, or counties for construction of shore erosion control structures;

6. supervising or securing supervision of the construction of erosion control devices; and

7. securing the funds necessary to pay the State's share of any shore erosion control devices.

State Boat Act(1)

The Department of Chesapeake Bay Affairs shares administrative responsibilities for the State Boat Act with the Department of Game and Inland Fish. These agencies encourage the development, use, and enjoyment of all waters of Maryland for boating in cooperation with neighboring states and the federal government.

(1) Article 14B

The Department of Chesapeake Bay Affairs has primary jurisdiction over all tidal waters of the State while the Department of Game and Inland Fish has similar responsibility for non-tidal waters.

The Department's responsibilities are as follows:

1. preparing plans for the improvement and promotion of Maryland's water for recreational purposes;

2. promoting boating safety through an educational program directed to boat owners and operators;

3. planning a regulatory program in cooperation with other states, the federal government and with local agencies; and

4. improving the waterways of Maryland.

Several programs designed to implement the provisions of the Department's statutory authority are financed through the state boat tax. These include the dredging of small boat channels, debris removal, including old pilings,(1) and elimination and control of acquatic plants such as water chestnut, milfoil and sea lettuce.

## Department of Game and Inland Fish(2)

It was the intention of the General Assembly in the establishment of the Department of Game and Inland Fish to provide for the enforcement of game and fresh water fish laws and regulations and habitat improvement on private and public lands for the purpose of increasing and maintaining wildlife and fish populations.

The Director is appointed by the Game and Inland Fish Commission.(3) He shall be responsible for the exercise of all the powers and duties conferred upon the Department by the provisions of this Article. The Director shall serve as a departmental member of the Board of Natural Resources.

### Powers and Duties of the Department

The powers and duties of the Department are as follows:

(1) The Department has under construction at the present time a boat designed specifically for removal of floating debris. It will be used wherever needed on the State's tidal waters.
(2) Article 66C - 1957 Code of Maryland Laws and 1965 Supplement.
(3) The Game and Inland Fish Commission consists of five members appointed by the Governor.

1. controlling hunting, capturing, killing, possessing, selling, purchasing, shipping, transporting, or exporting of any wild bird, animal, or fish from inland waters;

2. issuing hunting, fishing and other licenses that are required;

3. erecting and maintaining fish hatcheries, ponds and rearing stations for supplying inland waters with fish;

4. cooperating with landowners and state and federal agencies in developing water resources for suitable wildlife habitat;

5. cooperating with other state and federal agencies in studying current tidewater environmental problems affecting wildlife;

6. developing water resources on Department-owned lands for use of wildlife; and

7. seeding and planting banks of drainage projects with food and cover plants for wildlife and for erosion control and maintaining constant surveillance over water pollution and streamflow and their effects on fish and wildlife.(1)

## Department of Forests and Parks(2)

It was the intention of the General Assembly in the establishment of the Department of Forests and Parks to exercise to the fullest extent possible the responsibilities of the State of Maryland in the encouragement of economic development and use of its natural resources for the improvement of the local economy, preservation of natural beauty and promotion of the State's recreational interests.

The Director is appointed by the Governor, with the advise and consent of the Senate, and serves at his pleasure.(3)

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(1) It is the duty of the game wardens in charge of Deep Creek Lake to see that boats that are not complying with regulations or which are polluting the waters with oil or other wastes are not permitted to ply the waters of the lake.

(2) Article 66C - 1957 Code of Maryland Laws and 1965 Supplement.

(3) The Commission of Forests and Parks consisting of seven citizens appointed by the Governor serves in an advisory capacity to the Director.

Powers and Duties of the Department

The powers and duties of the Department with respect to water resources are as follows:

1. promoting good forest management practices on both public and private woodlands of the State and providing the necessary technical assistance to insure protection against erosion, siltation and flooding;

2. securing high-quality water for recreational purposes and domestic use within park areas and providing adequate sanitary facilities in recreational areas maintained by the State; and cooperating with other state agencies, counties, towns, corporations and individuals in preparing plans for park and recreational area acquisition and development;

3. operating a nursery from which seedlings are supplied free to landowners for conservation purposes, including erosion control; and

4. acquiring and managing lands for watershed protection.

## State Planning Department(1)

It was the intention of the General Assembly that the State Planning Department function as the Governor's staff agency in planning matters and that the Department prepare, recommend and continually provide an integrated program for the development and effective employment of the natural and other resources of the State.

The Director of the Department is appointed and serves at the pleasure of the Governor.

The Planning Commission consists of nine members, seven of whom are appointed by the Governor, and one each by the Speaker of the House and the President of the Senate. They serve in an advisory capacity to the Director.

Powers and Duties of the Department

The powers and duties of the Department as pertaining to water and related land resources are as follows:

1. preparing and from time to time revising, amending, extending or adding to, a plan or plans for development of the State;

(1) Article 88C - Code of Maryland Laws - 1957 Edition.

2. acting as the Governor's principal staff agency in planning matters concerning the resources and development of the State;

3. undertaking special studies and investigations, and rendering advice to the Governor at his request;

4. preparing and from time to time revising inventory listings of the State's natural resources;

5. cooperating with and providing assistance to local, state, and federal governments and agencies, educational institutions and research organizations in research, planning and special studies;

6. representing, through its Director and staff, the State on river basin planning projects in the Ohio, Potomac and Susquehanna river basins; and

7. acting in a liaison and coordinating capacity between the respective state, federal, and local governmental units and the public at large in water and related land resources planning and development activity.

## Department of Economic Development (1)

It was the intention of the General Assembly in the establishment of the Department of Economic Development to advance the economic welfare of the people through programs and activities which will lead to optimum utilization of the State's natural resources and realization of its economic opportunities pertaining to all facets of commerce, industry, tourism and recreation; to promote and encourage the location of new industry and business in the State; to retain and expand present enterprises and to foster and develop gainful employment for the residents of Maryland.

The Director of the Department is appointed by the Governor on the recommendation of the State Commission of Economic Development, whose members are also appointed by the Governor, and serves at the pleasure of the Governor.

### Powers and Duties of the Department

The principal powers and duties of the Department are:

1. initiating and maintaining contact with business and industrial prospects and informing them about all Maryland locations which might meet their requirements;

(1) Article 41 - Code of Maryland Laws - 1965 Supplement.

2. assembling, classifying and analyzing all existing data pertaining to the State's economic resources and problems;

3. reviewing and reporting on economic trends within the State;

4. assisting, encouraging and cooperating with community, regional and area industrial development efforts, both public and private;

5. fostering and promoting Maryland's tourism industry by advertising and publicizing the State's historic, scenic and recreational attractions;

6. coordinating state-level activities under the Appalachian Regional Development Act of 1965;

7. coordinating state-level activities under the State Technical Services Act of 1965;

8. providing staff support to the Governor's Science Resources Advisory Board;

9. coordinating state-level activities under The Public Works and Economic Development Act of 1965;

10. providing state-level liaison and certain administrative services for the Delmarva Advisory Council and the Tri-County Council for Southern Maryland.

## III. OTHER AGENCIES AND INSTITUTIONS

### Special Purpose Districts and Commissions

1. Sanitary Districts[1]

The governing body of any county may by ordinance or resolution or the governing bodies of two or more counties may by ordinances or resolutions create a district to acquire, construct, reconstruct, extend, repair, improve, maintain and operate a project as a public and corporate body.

Each ordinance or resolution shall include articles of incorporation setting forth the following:

a. name of the district;

b. statement that the district is formed under this subtitle;

c. name of the incorporating county or counties;

d. names, addresses, and terms of office of the first members of the commission; and

e. purpose or purposes for which the district is created.

A Sanitary District has taxing powers to obtain funds needed for construction, operation, and maintenance of works of improvement for water supply and sewerage facilities.

2. Soil Conservation Districts[2]

Any 25 occupiers of land lying within the limits of the area proposed to be organized into a district may file a petition with the State Soil Conservation Committee requesting the formation of a soil conservation district. There are now 24 districts in Maryland and all farm land in the State is included in one of these districts.

The conservation district is governed by a board of five supervisors, three of whom are elected by the land occupiers in the district and two appointed by the State Soil Conservation Committee.[3]

(1) Article 43 - 1957 Code of Maryland Laws - 1965 Supplement.
(2) Article 66C - 1957 Code of Maryland Laws and 1965 Supplement.
(3) The State Soil Conservation Committee is included under the University of Maryland in another part of this report.

Technical assistance is available to soil conservation districts from the Federal Soil Conservation Service and the Extension Service, University of Maryland. Soil conservation districts have authority to borrow money but do not have taxing and eminent domain powers.

Districts are authorized to carry out all types of soil and water conservation measures. They have the authority to, and do, act as the sponsoring organization for watershed projects under the Federal Watershed Protection and Flood Prevention Act (PL 566, as amended).

3. Public Drainage Associations[1]

The county governing bodies have the jurisdiction, power, and authority to establish public drainage associations in their respective counties; to locate and establish ditches, drains, or canals; and construct, straighten, widen or deepen any ditch, drain or watercourse for the purpose of draining wet, swampy, or flooded lands or lands subject to overflow.

To create a public drainage association landowners in a contiguous body of wet, swampy or overflowed land file a petition with the county governing body. The law provides for a determination of costs and benefits, public hearings and voting to determine the desirability of creating the public drainage association.

A public drainage association is governed by a board of managers elected by the benefited landowners in the area. An association has power to borrow money and the powers of taxation and eminent domain. Benefited landowners can be assessed for their proportionate share of the costs of establishing and maintaining the agreed upon works of improvement.

4. Public Watershed Associations[1]

The governing body of any county has jurisdiction, power, and authority to establish public watershed associations in their respective counties for the purpose of undertaking improvements for flood prevention, storage of water, adequate drainage facilities, and the protection of areas subject to sediment or erosion damages, and to cooperate with local, county, state and federal agencies in such activities.

Landowners within the area proposed for a public watershed association file a petition with the county governing body requesting

(1) Article 25 - 1957 Code of Maryland Laws - 1965 Supplement.

the creation of an association. The law provides for hearings, voting by the benefited landowners and determination of costs and benefits.

A public watershed association is governed by a board of directors elected by the benefited landowners and has the power to borrow money and powers of taxation and eminent domain. Benefited landowners may be taxed for their proportionate share of the costs of constructing the planned works of improvement and for their maintenance.

5. Shore Erosion Control Districts[1]

The owners of property abutting or bordering upon any body of water in the State may have a shore erosion control district created for the purpose of protecting their property against erosion (shore erosion) and deposition.

The landowners in the area file a petition with the county governing body requesting the creation of a district. The petition is then referred to the Shore Erosion Control Section of the Department of Chesapeake Bay Affairs. This Section reviews the petition and submits a report to the County Commissioners containing its recommendations on the feasibility and need for the district.

The county governing body is then authorized to establish the district and designate the area to be included.

Benefited landowners may be taxed for their proportionate share of the cost of the improvement. The county governing body is authorized to pay not more than 25 percent of the cost of the erosion control works of improvement and may accept from the State, the federal government and others, any portion of the remaining 75 percent of the total cost.

6. Forest Conservancy Districts[2]

It is the State's policy to encourage management and scientific development of its forests and woodlands and to maintain, conserve and improve the soil resources of the State. In so doing, the State shall encourage, assist and guide private ownership in the management and fullest economic development of privately owned forest lands.

(1) Article 25 - 1957 Code of Maryland Laws - 1965 Supplement.
(2) Article 66C - 1957 Code of Maryland Laws.

The Commission of Forests and Parks establishes by appointment in each county a county forestry board of not less than five members.

The Commission employs and assigns to each county (or district) board project forester(s) who, in addition to other duties, serve as secretary and executive officer of the county (or district) forestry boards.

7. Patuxent River Watershed[1]

The governing boards of the counties of Howard, Montgomery, Prince George's Anne Arundel, Charles and St. Mary's created the Patuxent River Watershed in their respective counties and acting cooperatively with each other and with the Department of Forests and Parks provide for the protection of the watershed through a program of flood prevention, conservation, protection of areas subject to sediment or erosion damage, prevention of encroachment by rapid growth and spread of urban development in cooperation with local, county, state, and federal agencies.

The governing boards of these counties are authorized to make and adopt and from time to time amend, extend or add to, a Patuxent River Watershed Plan, bearing the approval of the Department of Forests and Parks.

For the purpose of carrying out the intent of this enabling legislation, the county governing bodies have the following powers and duties:

a. acquire title to land;

b. receive and expend contributions, donations, or appropriations which may be made for such purposes;

c. expend funds to acquire lands outside the area of the plan if such acquisitions are necessary to carry out the plan;

d. sell any land previously acquired but later found not to be needed for the purpose of this subtitle; and

e. levy an annual or special tax on all property assessed for taxation purposes to be used in carrying out the watershed plan.

The Department of Forests and Parks includes in its annual budget a request for funds to be used for the acquisition of lands

(1) Article 66C - 1957 Code of Maryland Laws - 1965 Supplement.

within the above counties for the purposes enumerated in this subtitle. These funds when appropriated are matched by the appropriate county or counties.

8. Washington Suburban Sanitary Commission

The Washington Suburban Sanitary Commission was created by an Act of the Maryland Legislature in 1918. The jurisdiction of the Commission includes large areas of Montgomery and Prince George's counties. These two counties form the Maryland boundary with the District of Columbia.

Powers and duties of the Commission are as follows:

a. providing for the construction, operation and maintenance of water supply and sanitary sewerage facilities;

b. constructing water and sewer house connection lines from the Commission's mains to abutting properties;

c. reviewing and prescribing engineering requirements for all storm drainage plans within the suburban area and constructing storm drains within the fund limits prescribed by the Maryland General Assembly;(1)

d. approving the location of and issuing permits for all utilities to be installed in public ways of the Suburban Maryland Area;

e. presiding over the design and construction of private water and sewerage systems proposed for areas within Prince George's and Montgomery counties beyond the reach of WSSC's regional water and sewerage systems;(2)

f. maintaining and operating the Anacostia River Flood Control and Navigation Project in central Prince George's Country; and

g. maintaining refuse collection service for about 63,000 residential units in suburban, unincorporated areas of Montgomery County, and operating the Anacostia Sanitary Landfill for refuse disposal in central Prince George's county.

(1) The WSSC also maintains storm drainage facilities under its jurisdiction in parts of Montgomery and Prince George's counties.
(2) The WSSC also has "oversight" authority in the maintenance and operation of these facilities.

9. The Maryland-National Capital Park and Planning Commission

The Commission has general planning and park jurisdiction power within the Maryland-Washington Metropolitan District and the Maryland-Washington Regional District. Both Districts are in Montgomery and Prince George's counties adjoining the District of Columbia.

The Commission is composed of ten members, five each from Montgomery and Prince George's counties.

Within the Maryland-Washington Metropolitan District, the Commission is empowered to acquire, develop, maintain and operate a park system with recreational facilities. Within the Maryland-Washington Regional District, which includes and extends beyond the Metropolitan District, the Commission is empowered to make, adopt and amend a general plan for the physical development of the District which takes into account all factors of urban, suburban, rural and regional planning.

The major water related activities of the Commission are as follows:

a. planning for and construction of lakes and reservoirs for recreational purposes;

b. flood plain zoning prohibiting building within a flood plan resulting from a 50-year frequency storm;

c. acquiring major stream valleys for parks;

d. proposing additional lakes for recreational purposes;

e. cooperating with the Maryland Department of Forests and Parks for multi-purpose development of the Patuxent River Watershed; and

f. cooperating with the Potomac River Task Force in developing plans for the Potomac Valley Park.

10. Upper Potomac River Commission[1]

The Upper Potomac River Commission, established in 1935, consists of three members appointed for six-year terms. The Governor appoints the Chairman, the County Commissioners of

(1) Acts 1935 Chap. 409; Acts 1936 Chap 6; Acts 1939 Chap. 143; Acts 1947 Chap. 165.

Allegany County appoint a second member, and the County Commissioners of Garrett County appoint a third. The Commission has jurisdiction over the water resources of Allegany County and of Election District Number 4 (Bloomington) in Garrett County. In 1953, the Commission took charge of the Savage River Dam, erected by the Army Corps of Engineers. In addition, the Commission now operates the waste treatment plant at Westernport, Maryland.

## County Governing Bodies

Boards of County Commissioners and County Councils are concerned with the development and use of water and related land resources. In addition to their role in county planning and zoning, they have specific responsibilities with respect to many of the special-purpose districts. County governing bodies have definite jurisdiction with respect to the creation and operation of the following:

1. Sanitary Districts;

2. Public Drainage Associations;

3. Public Watershed Associations; and

4. Shore Erosion Control Districts.

County governing bodies can act as one of the local sponsoring organizations in a number of the watershed projects under the Federal Watershed Protection and Flood Prevention Act (PL 566, as amended).

## Municipal Corporations - Cities and Towns

Maryland has both municipally and privately owned and operated water supply companies. The two largest systems in the State are those operated by Baltimore City and the Washington Suburban Sanitary Commission.

The power of eminent domain can be used either by municipal or private water companies in acquiring water and other property rights.

The State Legislature has authorized municipalities to create special taxing districts for financing storm drainage systems. (Article 23A, Sec. 44, Code of Maryland Laws, 1957 Edition, 1965 Cumulative Supplement.)

Municipal authorities may take or acquire any land, structures, buildings, watercourses, water rights or other property in fee or as an easement, within or outside the municipality for the construction, establishment, extensions, alteration and maintenance of any

facility for a water supply, sewerage, drainage or refuse disposal. (Article 43, Section 410 - Code of Maryland Laws - 1957 Edition.)

## The University of Maryland

A number of activities are carried on by the University of Maryland related to the conservation, development and use of water and related land resources. While State departments, agencies, and commissions have their related responsibilities delineated within Legislative Statute; the activities occurring within the University are not so assigned. For this reason, it is useful to briefly discuss the more important programs occurring at the University in the water resources field. The activities occurring at the University are as follows:

### 1. Natural Resources Institute - University of Maryland[1]

The Natural Resources Institute is under the supervision, direction and control of the Board of Regents of the University. The Director is appointed by the Board of Regents.

The Natural Resources Institute conducts comprehensive research and educational programs relating to the non-agricultural and forest resources of the State and aids the various State agencies responsible for managing these resources.

The principal divisions of the Institute include the Chesapeake Biological Laboratory, Solomons, Maryland; the Inland Resources Division and the Conservation Education Division, College Park, Maryland; the Seafood Processing Laboratory, Crisfield, Maryland; and a field station in Western Maryland dealing with problems in the Appalachian region. In addition, the Department issues a number of publications as part of its educational responsibilities.

### 2. Water Resources Research Center

The University of Maryland's Water Resources Research Center both encourages and sponsors research in all aspects of water resource development, management, utilization, and conservation.

An interdisciplinary Advisory Committee with representatives from five colleges and the Maryland Institute of Natural Resources recommends operational policy for the center and reviews all proposed projects. Faculty members throughout the University are asked to

(1) Article 66C - 1957 Code of Maryland Laws and 1965 Supplement.

submit research projects for consideration. An Advisory Council which will focus attention on the water research needs of Maryland is also planned.

Examples of the type of research currently underway include the following:

a. assimilation of water regimes;

b. effect of thermal pollution on productivity and stability of estuarine communities;

c. agricultural waste management for pollution abatement;

(1) disposal of waste from swine feeding floors;

(2) treatment of liquid waste from food processing plants;

(3) agricultural waste water utilization by various forages;

d. adsorption of synthetic organic pollutants;

e. method of mixing a hot stream or jet of water with cool water;

f. settling characteristics of flocculent and non-flocculent materials;

g. investigation of factors affecting the intensity of water recreation facilities; and

h. enhancement of recreational use of estuarine water through study of potential control methods of stinging sea nettles.

Under provisions of the Federal Water Resources Act of 1964, the Center receives an annual allotment to spend for approved projects.

3. The University of Maryland Water Resources Study Committee

The Committee, appointed from the faculty of the University, has undertaken a study for the Department of Water Resources to develop guidelines for future water resources policies and programs. The study will consider the relationship of the Department of Water Resources to other State departments concerned with water

resources development and management. The Committee's report is expected in June, 1966.[1]

4. College of Engineering

The College of Engineering is presently engaged in water resources research involving the improvement of water quality through the use of adsorption techniques, sedimentation control, water mixing and a cooperative drainage research program with the State Roads Commission.

5. College of Agriculture

The Board of Regents of the University of Maryland serves as the State Board of Agriculture. This Board has responsibilities with respect to all activities of the College of Agriculture, many of which pertain to water and related land resources.

a. The Agricultural Extension Service provides assistance to landowners, soil conservation districts, public drainage associations, public watershed associations, county governments and county planners with respect to water and related land-use problems.

b. The State Soil Conservation Committee has as members the Directors of the Maryland Experiment Station, Agricultural Extension Service, Department of State Forests and Parks, Department of Game and Inland Fish, Department of Water Resources, and the Chairman of the State Board of Agriculture and the Dean of the College of Agriculture of the University of Maryland. Also on the Committee are three soil conservation district supervisors appointed by the State Board of Agriculture.

This Committee is responsible for:

(1) creating soil conservation districts;

(2) electing and appointing supervisors to serve as the governing body of districts;

(3) assisting supervisors in carrying out their duties and programs;

(4) keeping districts informed of activities of other districts and facilitating an interchange of advice and experience;

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(1) The Committee has recently published a book entitled "Maryland Water Law," which will be included as one of the appendices to its report.

(5) securing the cooperation of the federal government and any of its agencies and of the agencies of this State in the work of such districts;

(6) disseminating information throughout the State concerning the activities and programs of soil conservation districts; and

(7) acting for the State in the approval of applications for planning assistance under the Federal Watershed Protection and Flood Prevention Act (PL 566, as amended).

c. The Agricultural Experiment Station directs and coordinates water research projects in cooperation with the different departments of the College of Agriculture. These activities are included in this report in the sections dealing with the Departments of Agricultural Engineering, Agronomy, Botany and Horticulture.

d. Agricultural Engineering Department

(1) The State Department of Drainage promotes and encourages the drainage of agricultural land. They provide assistance to groups interested in organizing public drainage and watershed associations.

(2) The Department of Agricultural Engineering is cooperating with the Livestock Engineering and Farm Structures Branch, Agricultural Engineering, Research Division, U.S. Department of Agriculture, in studies of farmstead water supplies and farm waste disposal.

(3) Research is being conducted relative to the use of waste stabilization lagoons as a means of satisfactorily disposing of farm wastes.

(4) Personnel from the Department of Agricultural Engineering render assistance to farmers in developing design criteria for irrigation systems and advise farmers on the quality of water for irrigation.

(5) The Department's personnel assists the processors of agricultural products, principally poultry and vegetables, in developing design criteria for disposal of waste through sprinkler irrigation.

e. The Agronomy Department is currently conducting water resources research regarding determining the effect of water shortages on corn yields; determining root distribution and moisture extraction patterns of alfalfa, corn, soybeans, and bluegrass; and establishing the effects of irrigation upon certain farm crops including tobacco.

f. The Department of Horticulture is currently conducting water resources research relating to the use of water by vegetable crops and the depth zones from which it is extracted; the response of fruit - primarily peaches - to irrigation and depth zones from which water is extracted by the trees; and the possibilities of waste water re-use in food processing plants.

g. The Botany Department is currently conducting a quantitative and qualitative study of the submerged and emergent macrophytes of the Patuxent River in order to evaluate the actual effects of thermal and the potential effects of sewage pollution upon such plant life in an estuary; a floristic study of Assateague Island including the salt marshes and adjacent Chincoteague Bay; a resurvey of the vegetation on and adjacent to certain Eastern Shore sand pits and studies of aquatic fungi in ponds surrounding College Park and in the fresh water and estuarine habitat of the Patuxent River.

### Chesapeake Bay Institute of The Johns Hopkins University

The Institute, although not a State agency, is available to the State agencies for conducting research projects under contract. The Director of the Institute is a member of the State Board of Natural Resources.

Oceanographic studies are carried out by the Chesapeake Bay Institute, a research division of the University, and its Department of Oceanography. Primary attention in the research activities is with the waters and aquatic life within the waters of the Chesapeake Bay.

## Interstate Compacts

### 1. Interstate Commission on the Potomac River Basin[1]

Congress authorized Maryland, Pennsylvania, Virginia, West Virginia and the District of Columbia to enter into a compact providing for the creation of a conservancy district to consist of the drainage basin of the Potomac River for the purpose of regulating, controlling, and preventing the pollution of the waters of the Potomac drainage area by sewage and industrial and other wastes.

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(1) Article 43 - 1957 Code of Maryland Laws - 1965 Supplement. While Maryland has ratified suggested amendments to the Compact indicated by the legal citation, Virginia has not and, therefore, the amendments have not become effective. The major powers of the Commission outlined in this document are those ratified by all signatory parties.

The Commission consists of three representatives from each state and three members appointed by the President. The Governor and two members named by the Governor, who are residents in the Potomac River Drainage Basin represent the State of Maryland on the Commission. In addition to the three representatives from Maryland serving on the Commission, other citizens of the State serve on various committees appointed by the Commission.

Major powers of the Commission are as follows:

a. collecting data, conducting research, and preparing reports on the character, pollution, and condition of streams in the basin;

b. cooperating with the legislative and administrative agencies of the signatory parties, commissions and other organizations for the purpose of promoting uniform laws, rules, and regulations for the abatement and control of pollution;

c. disseminating to the public information in relation to stream pollution problems;

d. cooperating with other organizations engaged in fact-finding and research activities on the treatment of sewage and industrial wastes; and

e. making, revising, and recommending to the states reasonable minimum standards for the treatment of sewage and industrial wastes discharged, or to be discharged, into the streams of the basin.

2. The Potomac River Fisheries Commission[1]

Maryland and Virginia both recognize the importance of the Potomac River fisheries. In order to assist in the maintenance of this resource the states entered into an agreement to establish a Potomac River Fisheries Commission.

The Commission consists of six members, three from Maryland and three from Virginia. The Chairmanship of the Commission alternates from year to year between the states' representatives.

The powers and duties of the Commission are as follows:

a. making a survey of the oyster bars and undertaking any reseeding and replanting that may be necessary;

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(1) Article 66C, 1957 Code of Maryland Laws - 1965 Supplement.

b. prescribing the type, size, and description of all species of finfish, crabs, oysters, clams, and other shellfish taken or caught and the places and manner in which they are caught;

c. maintaining a research program;

d. issuing the required licenses;

e. imposing an inspection tax not exceeding 25¢ per bushel upon all oysters caught within the limits of the Potomac River; and

f. making rules and regulations necessary and desirable for authorizing and regulating the dredging of soft shell clams and levying license fees for such dredging.

3. Atlantic States Marine Fisheries Commission(1)

Fifteen Atlantic Coast states entered into a compact establishing the Atlantic States Fisheries Commission. Each State is represented by three commissioners, one of whom must be the chairman or director of the fisheries management agency. In Maryland, this person is the Director, Department of Chesapeake Bay Affairs.

The Commission serves in an advisory capacity in the development of joint programs dealing with species of fish or bodies of water common to two or more states. The technical advice and research facilities of the United States Fish and Wildlife Service are available to the Commission and its member states.

## Intergovernmental Committees

1. Interstate Advisory Committee on the Susquehanna River Basin

The Interstate Advisory Committee on the Susquehanna River Basin was established to coordinate the interests of the several jurisdictions in all matters pertaining to the planning, development, and management of the water and related land resources of the basin.

The Advisory Committee is comprised of four members each from Maryland, Pennsylvania, and New York, two of whom are designated from the State legislature and two from the executive branch, one to be an appropriate administrative official and the other a designee of the Governor.

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(1) Article 66C, 1957 Code of Maryland Laws and 1965 Supplement.

The Chairman of the Advisory Committee may, upon recommendation of the state delegations, appoint members to such subcommittees as may from time to time be created. Consulting members to the subcommittees may include state, local, and federal officials and representatives of civic and other organizations concerned with the development of the basin.

Federal cooperation through the appropriate agencies is desired to the fullest possible extent.

The duties of the Committee are as follows:

a. promoting, coordinating, cooperating and where necessary undertaking studies of the Basin and its problems;

b. assisting in the formulation and implementation of plans for the development and proper management and use of the water and related resources of the Susquehanna River Basin;

c. coordinating the activities of the appropriate state and federal agencies in planning and implementation including, but not limited to, the abatement of pollution, flood control and zoning, the general use and control of the waters of the basin, the development of recreational areas, the encouragement of agricultural and economic development in appropriate areas and the conservation and wise utilization of the forests and other natural resources of the basin;

d. encouraging appropriate policies in the three states and the enactment of state laws for their effectuation; and

e. studying and recommending legislation for the creation of a permanent intergovernmental agency for the proper management and effective utilization of the resources of the Susquehanna River Basin.

2. Potomac River Basin Advisory Committee

The Potomac River Basin Advisory Committee was established to coordinate the interest of the several basin jurisdictions on all significant matters pertaining to the water and related land resources of the Potomac Basin, to bring to the attention of responsible federal agencies the general concern and interest of the states and the District of Columbia in these matters, and to advise the heads of government on the best possible kind of permanent interstate organization for the planning and development of the resources of the basin.

The Advisory Committee consists of three representatives each from Maryland, Pennsylvania, Virginia, West Virginia, and the District

of Columbia, appointed by the respective Governors and by the President of the Board of Commissioners of the District of Columbia.

The Chairman of the Advisory Committee may, upon the recommendation of the states' representatives appoint members to such subcommittees as the parent committee may create. Consulting members may include state, local, federal and/or interstate officials and representatives of civic or other organizations concerned with the development of the basin, as well as other individuals having special knowledge or competence in matters of concern to the Committee.

The duties of the Committee are as follows:

a. assisting in the formulation and implementation of plans for the development, management, and use of the water and related resources of the Potomac River Basin;

b. seeking and coordinating the views of the several basin jurisdictions, political subdivisions, industries, organizations, and the general public on all significant matters pertaining to the Potomac River;

c. considering these views with representatives of the Departments of the Interior and the Army and with such other federal and state agencies and officials as the Committee may deem appropriate;

d. informing the Governors and the Board of Commissioners of the results of the Committee's activities under b and c above, together with the recommendations of the Committee in relation thereto; and

e. determining and advising the respective Governors and the Board of Commissioners concerning the best possible kind of permanent interstate organization for the planning, development, and administration of the waters and related land resources of the Potomac River Basin.

3. Susquehanna River Basin Study Coordinating Committee

In 1961 a comprehensive study of the water and related land resources of the Susquehanna River Basin was authorized by Congress. The task of preparing the report and coordinating work done by others in support of this study was given the Corps of Engineers, U.S. Army. Because many federal and state agencies were necessarily involved in the study, a Coordinating Committee was established to coordinate plans and programs to avoid duplication or gaps in the study effort.

Membership of the Committee consists of representatives from the three basin states, New York, Pennsylvania, and Maryland, and from seven different federal agencies. These federal agencies have authorized interests or current programs operating in the Susquehanna River Basin. The State Planning Department through its Director and staff serve as the State's representative on this Committee.

The main purpose of the Coordinating Committee is to establish broad guidance and provide general direction for the study. This will insure the development of a plan that will make best use of the resources available, and will take into consideration the views and needs of the people concerned.

4. Ohio River Basin Comprehensive Survey Coordinating Committee

The Corps of Engineers, U.S. Army, is conducting a comprehensive investigation of water and related land resource development needs in the Ohio River Basin. The basic objective of the survey is the formulation of a framework plan of development which will serve as a broad guide to the best use, or combination of uses, of the water and related land resources of the basin to meet foreseeable short and long-term needs.

At the request of the Corps of Engineers, the Ohio River Basin Comprehensive Survey Coordinating Committee has been created. Membership includes representatives from the several concerned federal agencies and one representative from each of the eleven states in which the basin falls - Illinois, Indiana, Kentucky, Maryland, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia. The State Planning Department through its Director and staff serve as the State's representative on this Committee.

The main functions of the Coordinating Committee are:

a. providing a basis for full and continuing exchange of views during the Ohio River Basin investigations;

b. advising and assisting all participating agencies in regard to objectives, work assignments, and schedules;

c. assisting in the resolution of study problems as they arise; and

d. periodically reviewing progress.

The Coordinating Committee will provide the necessary liaison between the study activities and the federal departments and with the states and commonwealths represented.

States and commonwealths concerned with the area under study will contribute data and information to the overall study effort and will participate in the formulation of a comprehensive plan of development of basin resources.

5. Water Development Coordinating Committee for Appalachia

The Water Development Coordinating Committee for Appalachia was created by the Corps of Engineers in conjunction with the development of a plan for the Appalachian Region. This Committee will serve to coordinate the studies of the Corps of Engineers and other federal agencies and the activities of the 12 states in the Appalachian Region. The Department of Water Resources and State Planning represent the State of Maryland on this Coordinating Committee.

The Corps of Engineers' "Plan of Survey for Development of Water Resources of Appalachia" identifies the following objectives:

a. developing a comprehensive plan for efficient utilization of Appalachia's water and related land resources;

b. considering the plan in conjunction with the overall economic development program for the region and nation;

c. improving awareness of the economic effects of water resources development;

d. recommending needed programs and projects; and

e. providing for continuity of planning after 1968.

6. North Atlantic Water Resources Study Coordinating Committee

The Water Resources Council delineated the North Atlantic Region as one of 18 throughout the United States for a comprehensive framework study in response to the 1961 report of the Senate Select Committee on National Water Resources. Congress further authorized and directed the Secretary of the Army to have the Corps of Engineers prepare a framework plan for the North Atlantic Region. This study was begun in 1966.

The geographical area to be encompassed by the North Atlantic Region study includes all river basins draining into the Atlantic Ocean at points north of the Virginia-North Carolina line, portions of the Lake Champlain drainage within the United States, and the St. Lawrence River drainage below the junction of the St. Lawrence River, and the International boundary. The states of Maine, New Hampshire, Vermont, Connecticut, Massachusetts, Rhode Island, New Jersey, Delaware and the District of Columbia and portions of the

states of New York, Pennsylvania, Maryland, West Virginia, and Virginia are included within the study area boundaries. There are 45 million people living in the area, or about one out of every four citizens of our nation.

The Coordinating Committee is composed of representatives from the above states, as well as concerned federal agencies. The State planning Department through its Director and staff serves as the State's representative on this Committee. The Coordinating Committee is serviced by the Corps of Engineers.

There are presently several water and related land resources and economic studies underway within the region.

The Coordinating Committee will establish broad guidelines and provide the general direction for participation in developing a framework water resources plan that will take into consideration the views and needs of those concerned and will coordinate the portions of the work being carried out by individual federal and state agencies.

The activities of the Committee will include the following:

a. establishing policy for coordination of study efforts;

b. considering the views of all participants as reported to the Committee and resolving any differences or conflicts arising from these views;

c. considering reports from all participants, reviewing each agency's report, and transmitting its views to the agency concerned;

d. providing information to the public at regularly scheduled meetings;

e. preparing reports on the study at the appropriate times; and establishing and supervising the activities of appropriate subcommittees and task forces.

The report will focus on three main questions: present and long-range water and related land resources needs in the North Atlantic Region; the potentials for meeting these needs; and procedures to be followed in meeting the identified needs.

The report will present conclusions drawn in part from the following types of basic data;

a. future population levels and rates of growth;

b. present and future social and economic characteristics of the area;

c. population and industrial concentration, urbanization and agricultural development;

d. methods of water resource development;

e. Developable water resources; and

f. schedule of needed water resource development.

Recommendations will be of the following nature:

a. adoption of a framework plan for water resource development;

b. federal and state responsibilities in implementation of the framework plan;

c. timing, costs, and funding levels of detailed federal and state studies for specific projects to meet present and near-future needs of organization for such detailed studies; and

d. provision for continuous federal and state coordination and updating of the framework plan.

The North Atlantic Region study is scheduled to be completed in five years and will require the investment of approximately $4 million of federal funds.